Economic Consultants Northwest

A PROPOSAL TO CONDUCT A NEEDS ASSESSMENT OF NATURAL RESOURCES INFORMATION USERS

January 24, 1986

Submitted to:
Natural Resources Information System
Montana State Library
1515 East Sixth Avenue
Helena, Montana 59620

Submitted by:
Economic Consultants Northwest
1400 Eleventh Avenue
Helena, Montana 59601

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PROPOSAL EVALUATION
PAGE REFERENCE

The following refers to page numbers in this proposal where information pertinent to the Proposal Evaluation Criteria can be located.

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1. Needs Assessment Experience/Knowledge	10
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For specific information regarding experience and knowledge of each individual, please refer to the resumes in Appendix A.

I. INTRODUCTION

The Montana National Resources Information System (NRIS) has recently been established to acquire, organize, store, retrieve, and disseminate information on Montana's natural resources. There is a considerable body of natural resources information housed in public and private libraries; state, federal, and local agencies; educational institutions; and at various other places such as consulting firms and environmental groups. This information includes diverse materials such as published and unpublished technical reports; maps; raw data files and lists; aerial and on-the-ground photography; scientific specimens; historical accounts and observations; and environmental laws, rules, and regulations.

Because of the diversity of subject material and highly variable interests and needs of potential users, it is necessary to determine information priorities so that the NRIS can focus attention in proportion to the expected demand. The most effective way to identify specific user groups and demands is through a needs assessment of those groups and individuals who would be expected to avail themselves of NRIS services.

This proposal is submitted by ECN in response to the Request for Proposals (RFP) solicitation of the NRIS to conduct a user needs assessment. The primary objectives of the proposed project are to:

1) Identify known and potential users of Montana natural resources information.
2) Identify needs of users of natural resources information and the characteristics of a system that would most effectively and efficiently meet those needs.

3) Analyze the survey results and make recommendations concerning user group priorities, resource area priorities, and system features which would be most compatible with user group desires and expectations.

ECN is joined in this proposal by Dr. Joe C. Elliott, Ecological Consultant. ECN has extensive experience in survey design, administration, and analysis; whereas, Dr. Elliott's expertise is in natural resources. Combining the knowledge and experience of this team of professionals will ensure the delivery of a quality product to the NRIS.

This proposal presents the technical approach that will be used to conduct the study, a description of professional qualifications, list of related past projects and technical reports, a detailed budget, and a time schedule. Personal resumes of individuals who will be involved in the project are contained in Appendix A. Copies of relevant reports produced for past clients are also submitted as attachments to this proposal.

II. METHODOLOGY

A. Task 1: Mailing List Preparation

ECN will prepare an automated mailing list of known and potential users of information on Montana's natural resources. The mailing list will include, but will not be limited to, the following target groups:

1) Natural resource attorneys.

2) State government bureaus with natural resource-related functions.

3) Federal government including each local or district office of the U.S. Forest Service, Bureau of Land Management, Soil Conservation Service, Agricultural Stabilization and Conservation Service, Bureau of Reclamation, Bonneville Power Administration, Western Area Power Administration, Bureau of Indian Affairs, Corps of Engineers, Rural Electrification Administration, Environmental Protection Agency, Federal Energy Regulatory Commission, Fish and Wildlife Service, Park Service, Bureau of Outdoor Recreation, Geological Survey.

4) Industry and business groups, particularly those subject to environmental permitting requirements.

5) County, local, and municipal governments and planning boards.

6) Citizens' groups.

7) Scientific societies.

8) Elementary and secondary school districts.

9) Departments of and program directors within Montana colleges and universities.

10) Indian tribes.

11) Consulting firms.

12) Other special commissions or groups with environmental data needs such as the Flathead River Basin Commission, Pacific Northwest Power Planning Council, Montana Association of Planners.

13) Major libraries.

Addresses and telephone numbers of the target groups will be obtained from such sources as federal, state, and local governments; association listings; yellow pages of telephone directories; and the NRIS. Appropriate contact persons within each of these groups (i.e., the person directly responsible for natural resources data) will be identified by on-site visits, telephone calls, or from lists provided by various agencies.

After the mailing list has been assembled, the contact person, agency/group name, source category (e.g., state government, federal government), address, and telephone number will be keyed into an automated mailing system that interfaces with WordPerfect. As the returned questionnaires are received, the list of the contact persons will be kept up-to-date to identify who has completed the questionnaire. ECN will then administer follow-up telephone calls to encourage the non-respondents to complete the questionnaire at that time or to complete and return the questionnaire as soon as possible.

B. Task 2: Survey Design

1. Questionnaire Design

In designing the questionnaire, the appearance, organization, content, and length are important because these factors influence whether the respondent will react positively and complete the questionnaire as requested or discard it due to confusion, antagonism, or lack of interest. In using a mail questionnaire, there is no opportunity for an interviewer to obtain respondent cooperation or explain question meanings; consequently, the design of the questionnaire becomes critical to the success of the survey.

Another important requirement for a successful mail survey is that the questionnaire should create a feeling of personal communication between the researcher and the respondent. A personalized approach conveys to the respondent the critical message that the study is important and that the respondent's participation is necessary for success of the survey.

One method of personalizing a questionnaire is through a support letter that accompanies the survey instrument (see Appendix B for sample). The support letter should be signed by a notable person to the respondent, stress the overall nature and importance of the survey, assure the respondent of confidentiality, and request that the respondent complete and return the questionnaire. ECN will produce original letters to accompany the questionnaires, complete with respondent name and address, to each individual on the mailing list.

Another technique which will be used to personalize the questionnaire concerns the back page of the questionnaire (see sample in Appendix B). On the last page, the respondent will be asked if they have any comments to add to the questionnaire. This measure will not only allow the respondent a chance to express additional opinions that he/she may have regarding the natural resources information system, but may also provide the NRIS with additional useful information.

Although personalization is an important objective, other practical considerations will be included in the survey process. For example, the survey packet will contain a preaddressed, postage-paid return envelope which will remind the respondent that it will not cost any money or require inconvenience to return the questionnaire. In addition, the packet will include a fact sheet that will describe the NRIS and its functions.

2. Survey Instrument Questions

Although broad user groups will be identified before the survey instrument is administered, the questionnaire will more precisely define the user group's characteristics. Survey questions will be designed, for example, to determine:

1) What types of natural resources information are utilized by specific user groups (e.g., baseline studies, species lists, environmental impact statements, scientific specimens, published technical reports, maps, aerial photographs, laws/rules/regulations, historical archives).

2) The major subject areas used by specific user groups (e.g., endangered species, wildlife, vegetation, water quality, air quality, geology, reclamation, facility siting, corridor selection, hazardous waste, fisheries, mitigation of impacts, environmental compensation, natural resources public policy, recreation, forestry).

3) The frequency of use of various types of data and the perceived importance of types of data and data subject areas by specific user groups.

4) Perceptions of user groups regarding existing impediments to obtaining and/or using specific types of data (e.g., unaware of where to obtain data, access to data restricted, time constraints in locating and obtaining data, cost constraints in finding and obtaining data, data is on microfiche and difficult to use, access to existing computer data bases not widely available, published technical reports not in Montana library system).

5) Preferred methods of cataloging and cross-referencing data types and subject areas (e.g., latitude-longitude, transverse mercator, county, habitat type, watershed, land ownership, geographical area).

6) The features or characteristics of data bases that would be most useful to different user groups (e.g., indexing, retrieving, reporting).

7) The geographical areas of the state that should be identified as priority areas for gathering new and updating old data bases.

8) The technically and scientifically most acceptable frequency for updating data bases.

9) The user groups most likely to make extensive use of the system once it is implemented.

3. Pretesting

Pretesting, a necessary step in evaluating the survey instrument, will be divided into two stages. The first stage will begin after the draft questionnaire is complete. Individuals who understand the nature of the study or who are experienced in mail survey design will be asked to critique the questionnaire. The second pretest stage will be the administration of a mockup of the questionnaire to a representative number of natural resources information groups. Revisions will be made in the final questionnaire to reflect any problems or criticisms that may result from the pretesting.

C. Task 3: Administration of Survey

After pretesting has been completed, revisions in the questionnaire made, and the final questionnaires printed, survey packets will be mailed to all names on the automated mailing list developed in Task 1. The surveys will be mailed on the day that the cover letter is dated. Each survey instrument will be identified by a number so that follow-up telephone calls to those individuals who have not responded can be made two weeks after the initial mail-out. At the time the telephone call is made, the interviewer will request that the potential respondent answer the survey questions or return the completed questionnaire as soon as possible.

D. Task 4: Data Analysis

Comprehensive and well designed data analysis procedures are essential for the interpretation of survey results. The following measures will be taken into consideration when designing the questionnaire for efficient automation and analysis:

1) The questionnaires will be printed in brown ink so that the response, if written in blue or black ink (or even in pencil) will be more discernable for data keying.

2) A column identifier will be placed next to each possible answer for more efficient data keying.

3) Close-ended questions will be implemented as much as possible to allow for less bias by the coder and to accelerate the coding process.

4) Answer categories for the close-ended questions will be limited to a minimum number of responses and open-ended questions may be grouped into categories, whenever possible, so that tabulations will be more meaningful and easily interpreted.

5) Type of user will be coded by source group (e.g., state agency, consulting firm, planners) to allow for frequency distributions and cross-tabulations to be generated by each target group.

A statistical computer package will be used to generate frequency distributions and requested cross-tabulations (see sample in Appendix C). After the survey data have been entered and tabulated, editing and outlier analyses will be performed on those categories that had responses which were not in the predefined range.

Cross-tabulation analysis will provide statistics designed to measure whether the variables are statistically dependent. By generating

A. Task 2: Data Analysis

Comprehensive and well designed data analysis procedures are essential for the interpretation of survey results. The following measures will be taken into consideration when designing the questionnaire for efficient automation and analysis:

1) The questionnaires will be printed in brown ink so that the responses, if written in blue or black ink (or even in pencil) will be more discernable for double keying.

2) A unique identifier will be placed next to each possible answer for more efficient data keying.

3) Close-ended questions will be implemented as much as possible to allow for less keys by the coder and to accelerate the coding process.

4) Answer categories for the close-ended questions will be limited to a minimum number of responses and open-ended questions may be grouped into categories, whenever possible, so that tabulations will be more meaningful and easily interpreted.

5) Type of case will be coded by source group (e.g., state agency, consulting firm, planners) to allow for frequency distributions and cross-tabulations to be generated by each target group.

A statistical computer package will be used to generate frequency distributions and requested cross-tabulations (see sample in Appendix C). After the survey data have been entered and tabulated, editing and analyses will be performed on those categories that had responses which were out of the predefined range.

Cross-tabulation analysis will provide statistics designed to measure whether the variables are statistically dependent. By generating

cross-tabulations (i.e., counting selected values from two variables), two-way contingency tables (see sample in Appendix C) will be produced and submitted with the final report. The NRIS staff and ECN will collectively select relevant cross-tabulations that will be generated and discussed in the final report.

E. Task 5: Report Preparation

A draft report will be submitted to the NRIS for review and comments. This report will represent the final report in discussing the methods used to design and conduct the survey, the survey results and comparisons among user groups, and, based on the information gathered, recommendations will be made for developing an effective natural resources indexing and referral system. To ensure completeness and compliance with the NRIS guidelines, ECN will work closely with the NRIS staff in determining the report format and content.

After the NRIS has returned the draft report to ECN, a meeting will be arranged so that all comments can be discussed, evaluated, and integrated into the final report. Two copies of the final report will be submitted to the NRIS and full documentation for all facets of the study will be provided including completed questionnaires, computer code, and computer output. ECN also will submit an 5 1/4 inch, IBM-compatible diskette containing the entire report using WordPerfect software.

ECN will retain the master report on file if more copies are desired by the NRIS; however, printing expenses for additional copies will be the responsibility of the NRIS. One copy of the report will be submitted to the Montana State Library so that the report will be available statewide through the inter-library loan program.

III. QUALIFICATIONS AND PROJECT STAFFING

A. Overview of Economic Consultants Northwest and Joe C. Elliott, Ecological Consultant

Economic Consultants Northwest (ECN) is a Helena-based, research consulting firm specializing in public opinion and market surveys, statistical and data analysis, project administration, needs assessment analysis, software development, forecasting, baseline studies, and environmental impact assessments. ECN has been providing consulting services to a wide range of clients in both the public and private sectors since 1981.

ECN has the necessary knowledge and experience to conduct the proposed user needs assessment. ECN conducted a user needs assessment for the Office of the Commissioner of Higher Education. A survey was administered to the users of the Montana Career Information System (MCIS), a statewide career and educational information network. Users were surveyed both before and after they used the system. The survey results were analyzed to determine the usefulness of the program and recommendations were made as to how the MCIS program could be enhanced. A needs assessment also was conducted for the Office of Public Instruction (OPI) in which relevant labor market information was gathered and vocational education programs in secondary schools were examined. This assessment determined whether the present programs being offered focused on training individuals for the jobs that were in demand in the labor market.

ECN has a history of completing projects within the specified time period. Two recent examples of rapid turn-around time are the completion of the sociology sections of the Jardine Joint Venture and the Montana

Tunnels environmental impact statements within a 30-day time period. Final reports were submitted to the Montana Department of State Lands on schedule, as well as all necessary corrections to the report were accomplished in the seven-day, turn-around timetable.

Joe C. Elliott, Ecological Consultant, provides professional services in vegetation and wildlife field studies; environmental impact statement preparation and review; analysis of compliance with state and federal laws; coordination of communication with regulatory agencies; natural resource remote sensing applications; siting studies for transmission lines, pipelines, and other linear facilities; expert testimony; air quality impact assessment of vegetation; preparation of reclamation plans; and project management. He has prepared numerous technical reports addressing various phases of natural resource planning, analysis, and management.

B. Survey Experience

ECN staff has had extensive experience in directing, designing, administering, and evaluating a wide variety of surveys. Listed below are a sample of the surveys completed by ECN.

Montana Department of Health and Environmental Sciences (1984-86 -- in progress). An on-going monthly statewide telephone survey is being conducted for the Centers for Disease Control to gather behavioral health risk information.

State Bar of Montana (in progress). A questionnaire is being designed to collect information from Montana attorneys regarding their preferences for future legal education seminars.

Montana Department of Natural Resources and Conservation, Planning and Analysis Bureau (1983-84). A statewide telephone survey was conducted to provide information on wood fuel use within Montana. ECN was responsible for designing and administering the survey and analyzing the results.

Montana Office of Public Instruction, Vocational Education Services (1983-84). A mail survey was designed and administered to Montana small businesses to determine the feasibility of promoting economic development through use of personal computers in small businesses.

Montana Department of Natural Resources and Conservation (1984). A telephone survey was designed and administered statewide to gather follow-up information on Montanans' energy conservation activities and attitudes.

Montana Department of Justice (1984). Telephone and mail surveys were designed and conducted to gather data to analyze the self-sufficiency of the DUI system in Montana.

Systems Engineering Services (1984). Designed and conducted a reconnaissance level telephone survey to determine the market potential for dragline simulators in the mining industry.

Montana Commissioner of Higher Education (1984). Designed and conducted a mail survey to evaluate the Montana Career Information System program, a statewide career and educational information network.

Galusha Higgins & Galusha, CPAs (1984). A client opinion mail survey was designed and administered to determine the clients' awareness and perception of services provided by the firm. Recommendations based on the survey results were provided.

Ken Wanner, private client (1984). To determine the feasibility of expanding a bowling facility in western Montana, a questionnaire was designed and administered by telephone to bowling alley owners/ managers.

ASARCO, Inc. (1983). A local telephone survey instrument was designed and administered to East Helena residents. The results were analyzed to determine the public image of the East Helena ASARCO plant.

Montana Department of Natural Resources and Conservation, Energy Division (1982-83). Nine different public sectors were surveyed to collect data on knowledge of and attitudes toward energy conservation and renewables. ECN designed the questionnaire, administered the survey, and analyzed the results to determine the most effective marketing plan for the DNRC energy outreach activities.

Montana Office of Public Instruction, Vocational Education Services (1983-84). A telephone survey was conducted to collect follow-up information on former vocational education students and the employers of the students.

Montana Department of Commerce (1983). A questionnaire was designed and telephone calls were made nationwide to radio and TV stations to gather information to determine the market feasibility of computer use for log scheduling.

C. Technical Publication Experience

Both ECN and Dr. Elliott have authored numerous unpublished reports. ECN's reports have been concerned with public opinion and marketing survey analyses, needs assessment, software documentation, feasibility analysis, baseline studies, and environmental impact assessments; whereas Dr. Elliott's unpublished technical reports include environmental impact assessments, baseline studies, reclamation planning, remote sensing, and linear facility siting. Following is a listing of published technical reports:

Economic Consultants Northwest (Richard Dodge):

School Enrollment Projections for Lewis and Clark County and Helena School District No. 1, prepared for Helena School District No. 1, 1978.

Montana Population Projections, 1975-2000, prepared for Montana Department of Community Affairs, 1977.

Montana Population Estimates, 1950-1975, prepared for Montana Department of Community Affairs, 1975.

A Survey of Population Estimation Procedures in Use by Local Governments, prepared for Montana Department of Community Affairs, 1975.

Montana Directory of Manufacturers, prepared for Montana Department of Planning and Economic Development, 1974.

Revenue Sharing, Montana's Alternatives, prepared for Montana Department of Planning and Economic Development, 1974.

Joe C. Elliott, Ecological Consultant

Elliott, J. and Richard T.T. Forman. 1965. Mosses from Eau Claire County, Wisconsin. The Bryologist. 68:471-73.

Elliott, Joe. 1969. Asymmetric Cell Division in the Protonema of Sphagnum palustre. XI International Botanical Congress (Abstract).

Elliott, Joe. 1970. Asymmetric Cell Divisions and Morphogenesis in the Protonema of Sphagnum palustre. Ph.D. Thesis, University of Montana. 81 pp.

Elliott, Joe. 1971. Histochemical Analyses of Differentiation in the Protonema of Sphagnum palustre. Amer. J. Bot. 58:5 (Abstract).

Elliott, Joe. 1975. Applications of Aerial Infrared Photography for Resource Evaluation and Management. Western Wildlands. Vol. 1, No. 4. (Publication of Montana Forest and Conservation Experiment Station, University of Montana)

Batson, F. and J. Elliott. 1975. Surface Resource Inventory of Eastern Montana Rangelands, Utilizing High Altitude Color Infrared Aerial Photography. In: Proceedings of Fort Union Coal Symposium, Montana Academy of Sciences. Vol. 5:651-62.

Elliott, J. and D. Culwell. 1977. The Northern Powder River River Basin Regional Environmental Impact Statement: A Joint State-Federal Planning Effort. Western Wildlands. Vol. 3, No. 4. (Publication of Montana Forest and Conservation Experiment Station, University of Montana)

Elliott, J. 1983. Vegetation Inventories in the Fort Union Region. In: Coal Development: Collected Papers. Bureau of Land Management, Denver, Colorado. pp. 1061-86.

Elliott, J. 1983. Natural Resource Applications of Remote Sensing. In: Coal Development: Collected Papers. Bureau of Land Management, Denver, Colorado. pp. 1375-94.

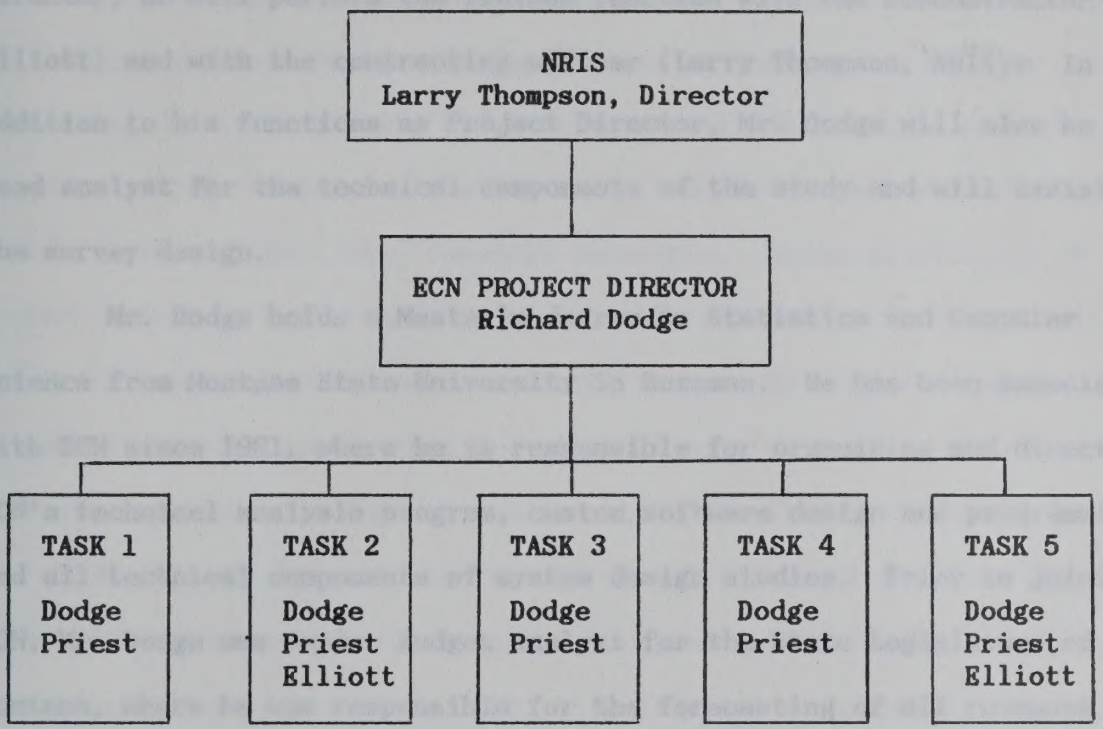
D. Project Management and Staffing

Management and technical personnel who will conduct the proposed study are well educated, experienced, and work together efficiently as a professional team. They have a record of performing similar or related work to this study, completing projects within the specified time and budget, coordinating with clients to ensure communication is maintained throughout the course of the project, and have a strong personal commitment to producing a quality product.

The following paragraphs describe the proposed staffing for the project (Figure 1). Complete resumes for all personnel who will be involved are in Appendix A.

FIGURE 1

PROJECT STAFFING



Mr. Richard Dodge, ECN Senior Statistician, will be the Project Director for the proposed study. He will be responsible for all phases of the contract--financial, administrative, and technical. As Project Director, he will perform the liaison function with the subcontractor (Joe Elliott) and with the contracting officer (Larry Thompson, NRIS). In addition to his functions as Project Director, Mr. Dodge will also be the lead analyst for the technical components of the study and will assist in the survey design.

Mr. Dodge holds a Master's degree in Statistics and Computer Science from Montana State University in Bozeman. He has been associated with ECN since 1981, where he is responsible for organizing and directing ECN's technical analysis program, custom software design and programming, and all technical components of system design studies. Prior to joining ECN, Mr. Dodge was Senior Budget Analyst for the State Legislature of Montana, where he was responsible for the forecasting of all revenues on which the state budget was established. Other projects in which he was involved included the development of an on-line computerized budgeting system for the State Legislature, impact simulation and modeling, and public finance analysis at the local, state, and federal levels.

Mr. Dodge has designed and programmed numerous on-line information systems for both state government and private sources. In particular, Mr. Dodge developed the following systems for state government:

1) County Profile System for the Department of Commerce. This is an information system for data retrieval on all counties in the state. Over 1,000 pieces of data on each county are gathered from various sources to output a county profile.

2) Legislative Interactive Budgeting System (LIBS). This is a mainframe on-line system that allows budget analysts to input, update, project, and display budgeting data for all programs in state government.

Ms. Linda Priest will serve as Survey Coordinator and will assist in questionnaire design and report writing. Ms. Priest received a Bachelor's Degree in Criminal Justice/Sociology from the University of Nebraska-Omaha. Since joining ECN in 1982, she has been responsible for the design, supervision, and implementation of surveys, as well as organizing, collecting data, and writing reports for various research projects. Prior to joining the ECN staff, Ms. Priest was employed by Western Analysis, Inc. as a Research Associate. While an employee of Western Analysis, Ms. Priest was responsible for primary data collection and field supervision of survey research teams. Ms. Priest also was responsible for organizing and com-piling a complete series of social and economic indicators to describe socioeconomic conditions in Montana.

Dr. Joe C. Elliott, Ecological Consultant, will serve as the expert in natural resources. He will assist in questionnaire design, data interpretation, and report writing. Dr. Elliott received his Ph.D. in Botany from the University of Montana in Missoula. He has been an ecological consultant in Montana for approximately 14 years and has worked on a variety of projects associated with natural resources management. He has utilized data compiled from numerous sources and is familiar with the needs of those who use or wish to obtain these sources. Dr. Elliott has also worked for the Montana Department of Natural Resources and Conservation (DNRC) as Coordinator of the Interagency Pipeline Task Force. While in this position, he coordinated the activities of six state agencies relative to data acquisition and regulations of pipeline construction. Having worked both in the public and private sectors, he has a good perspective on the variability in data storage, acquisition, and retrieval that exists among

data sources. His extensive background in the field of natural resources will complement the expertise of survey design, administration, and analysis that ECN brings to this project.

E. Computer Facilities

ECN has computer facilities that can handle all data analysis needs for the proposed project. ECN maintains remote batch and on-line capabilities with two large scale mainframe computers. These machines provide various scientific, engineering, and business packages for use in analysis. In addition, hard disk based microcomputers are used for in-house software development and as a remote batch entry system. This hardware provides flexible analytical tools for many specialized quantitative applications. ECN has found that interfacing the microcomputer with mainframe equipment reduces cost since mainframe use is minimized.

F. List of References

The ECN staff has an established reputation of successfully completing projects on schedule and within budget. The following is a list of references that would attest to the quality of work produced by ECN and the ability of ECN to complete work within specified time periods.

1) Gene Christiaansen
Montana Office of Public Instruction
Vocational Education Services

2) Bob Moon
Montana Department of Health
and Environmental Sciences
Health Services and Medical
Facilities Division

3) Kit Walther
Montana Department of State Lands
Environmental Analysis Bureau

4) Robert J. Robinson
Montana Department of Natural Resources
and Conservation
Director's Office

5) Tom Livers
Montana Department of Natural Resources
and Conservation
Conservation and Renewable Energy Bureau

References that would verify that Joe C. Elliott has produced natural resources technical documents within specified deadlines are:

1) Kevin Hart
Montana Department of Natural Resources
and Conservation
Facility Siting Bureau

2) Jim Posewitz
Montana Department of Fish, Wildlife
and Parks
Resource Assessment Unit

3) Larry Peterman
Montana Department of Fish, Wildlife
and Parks
Fisheries Division

4) Mike Watson
Technical Resource Corporation
Helena, Montana

5) Mike Kaczmarek
Morrison-Maierle, Inc.
Helena, Montana

IV. TIME FRAME AND BUDGET

A. Time Frame

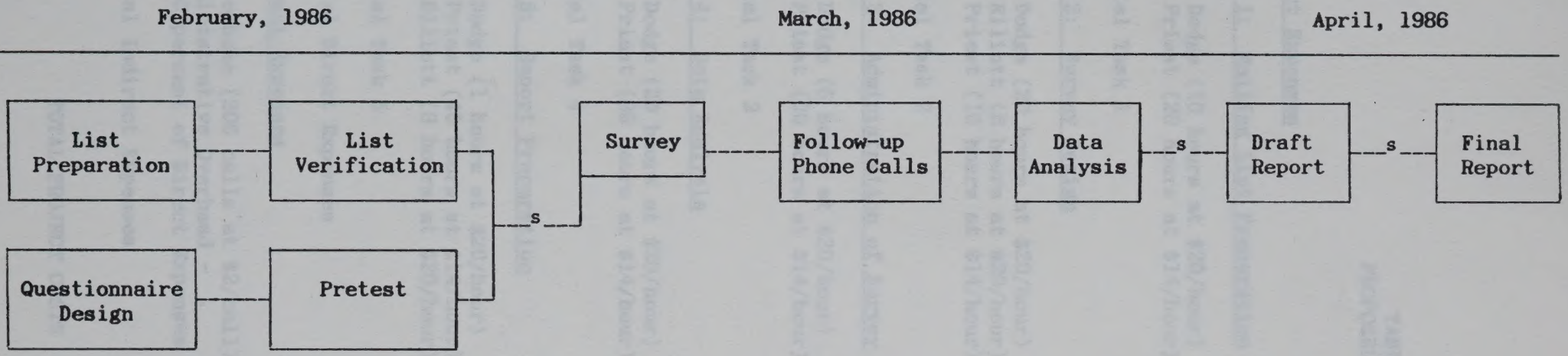
Figure 2 shows the proposed time frame that will be followed to complete the project by April 21, 1986. This time frame is dependent on work commencing on schedule (i.e., February 1, 1986).

B. Budget

Table 1 shows a detailed breakdown of staff time and associated expenses required to complete the proposed project. The overhead cost (30 percent) includes such items as secretarial assistance, computer time, depreciation, rent, and supplies. This budget is based on the assumption that the NRIS will provide all postage costs as described in the RFP.

FIGURE 2

TIME FRAME



s = NRIS Signoff

Final Report to be submitted on April 21, 1986.

TABLE 1
PROPOSED BUDGET

1. Direct Expenses		
Task 1: Mailing List Preparation		
R. Dodge (10 hours at $20/hour)	$ 200.00	
L. Priest (20 hours at $14/hour)	280.00	
Total Task 1	$ 480.00	
Task 2: Survey Design		
R. Dodge (20 hours at $20/hour)	$ 400.00	
J. Elliott (8 hours at $20/hour)	160.00	
L. Priest (10 hours at $14/hour)	140.00	
Total Task 2	$ 700.00	
Task 3: Administration of Survey		
R. Dodge (5 hours at $20/hour)	$ 100.00	
L. Priest (30 hours at $14/hour)	420.00	
Total Task 3	$ 520.00	
Task 4: Data Analysis		
R. Dodge (20 hours at $20/hour)	$ 400.00	
L. Priest (20 hours at $14/hour)	280.00	
Total Task 4	$ 680.00	
Task 5: Report Preparation		
R. Dodge (1 hours at $20/hour)	$ 200.00	
L. Priest (40 hours at $14/hour)	560.00	
J. Elliott (8 hours at $20/hour)	160.00	
Total Task 5	$ 920.00	
Total Direct Expenses		$3,300.00
2. Indirect Expenses		
Telephone (200 calls at $2/call)	$ 400.00	
Administrative Overhead - 30 percent of Direct Expenses	990.00	
Total Indirect Expenses		$1,390.00
TOTAL PROJECT COSTS		$4,690.00

TABLE 1
PROPOSED BUDGET

1. Direct Expenses

Task 1: Mailing List Preparation

B. Dodge (10 hours at $20/hour)	$ 200.00
L. Priest (20 hours at $14/hour)	280.00
Total Task 1	$ 480.00

Task 2: Survey Design

B. Dodge (30 hours at $20/hour)	$ 600.00
J. Elliott (8 hours at $20/hour)	160.00
L. Priest (10 hours at $14/hour)	140.00
Total Task 2	$ 700.00

Task 3: Administration of Survey

B. Dodge (5 hours at $20/hour)	$ 100.00
L. Priest (30 hours at $14/hour)	420.00
Total Task 3	$ 520.00

Task 4: Data Analysis

B. Dodge (20 hours at $20/hour)	$ 400.00
L. Priest (20 hours at $14/hour)	280.00
Total Task 4	$ 680.00

Task 5: Report Preparation

B. Dodge (1 hours at $20/hour)	$ 200.00
L. Priest (40 hours at $14/hour)	560.00
J. Elliott (8 hours at $20/hour)	160.00
Total Task 5	$ 920.00
Total Direct Expenses	$3,300.00

2. Indirect Expenses

Telephone (200 calls at $2/call)	$ 400.00
Administrative Overhead -	
30 percent of Direct Expense	990.00
Total Indirect Expenses	$1,390.00

TOTAL PROJECT COSTS	$4,690.00

APPENDIX A

RESUMES

RESUME

RICHARD E. DODGE

EDUCATION:

M.S., Statistics
Montana State University - 1973
Bozeman, Montana

B.A., Mathematics
University of Montana - 1967
Missoula, Montana

PROFESSIONAL EXPERIENCE:

1981-Present	Economic Consultants Northwest Helena, Montana Responsibilities: Principal/Statistician/ Systems Analyst - responsible for directing projects, data analysis, programming.
1981-Present	Dodge Data Systems Helena, Montana Responsibilities: Owner of computer software development company.
1977-81	Montana State Legislature Helena, Montana Responsibilities: Senior Budget Analyst - responsible for revenue forecasting, data analysis, and software development.
1973-77	Montana Department of Commerce Helena, Montana Responsibilities: Mathematical Statistician - responsible for data analysis and software development.
1970-73	Montana State University Bozeman, Montana Responsibilities: Graduate Teaching Assistant

RESUME

RICHARD K. SCOTT

EDUCATION:

M.S., Statistics
Montana State University - 1973
Bozeman, Montana

B.A., Mathematics
University of Montana - 1967
Missoula, Montana

PROFESSIONAL EXPERIENCE:

1981-Present Economic Consultants Northwest
Helena, Montana

Responsibilities: Principal/Statistician/
Systems Analyst - responsible for directing
projects, data analysis, programming.

1981-Present Budge Data Systems
Helena, Montana

Responsibilities: Owner of computer software
development company.

1977-81 Montana State Legislature
Helena, Montana

Responsibilities: Senior Budget Analyst -
responsible for revenue forecasting, data
analysis, and software development.

1973-77 Montana Department of Commerce
Helena, Montana

Responsibilities: Mathematical Statistician -
responsible for data analysis and software
development.

1970-73 Montana State University
Bozeman, Montana

Responsibilities: Graduate Teaching Assistant

SELECTED PROJECTS:

1986	State Bar of Montana (in progress): project director for the design of an opinion questionnaire. The information gathered will assist the State Bar in developing interest in future legal education seminars.
1985-86	Private Client (in progress): preparation of socioeconomic section (population projections, employment outlook, demographic features) of an environmental assessment for a proposed water development project on the Fort Apache Indian Reservation, Arizona.
1985-86	Montana Department of Health and Environmental Sciences (in progress): project director for the continuation of the Montana behavioral risk surveillance survey.
1985	Montana Office of the Legislative Auditor: system analysis, design, and programming of the Montana State Budgeting and Accounting System (SBAS).
1985	Montana Department of State Lands: prepared the demographic/population section for the Montana Tunnels Project (Jefferson County) Draft Environmental Impact Statement.
1985	Montana Department of State Lands: prepared the demographic/population section for the Jardine Joint Venture Draft Environmental Impact Statement.
1985	HKM Associates: updated the cash flow analysis for the Middle Creek Dam near Bozeman.
1985	Montana Office of the Legislative Fiscal Analyst: forecasted revenue projections for the State of Montana.
1984-85	Montana Office of Public Instruction: provided statistical assistance for the administration of vocational education professional development grants.
1984	Montana Department of Natural Resources and Conservation: project director of a statewide energy conservation survey.
1984	Montana Department of Justice: collected primary data to determine the self-sufficiency of the DUI system.

SELECTED PROJECTS:

1988

1988-89

1989

1989

1989

1989

1989

1989-90

1990

1990

1983-84	Montana Department of Natural Resources and Conservation: modified the WOODSTOV model to more accurately estimate and project wood fuel use within Montana.
1983-84	Montana Office of Public Instruction: field tested selected micro computer software in four Montana small businesses.
1983-84	Montana Office of Public Instruction: project director for a survey of Montana businesses to determine the feasibility of computer use in small business enterprises.
1984	Montana Department of Health and Environmental Sciences: provided technical and statistical assistance for a statewide behavioral risk surveillance survey.
1984	HKM Associates: provided statistical assistance for a water demand/feasibility analysis of the Middle Creek Dam near Bozeman.
1982-83	Montana Department of Natural Resources and Conservation: assisted in questionnaire design and statistical analysis for a survey of public and business attitudes toward energy conservation.
1983	Montana Department of Natural Resources and Conservation: a market analysis of industrial water demand/feasibility study of the Tongue River Dam.
1981	Responsible for designing and programming mathematical models for forecasting population of the state, planning districts, counties, and cities.
1981	Responsible for managing and designing an automated system for making postcensual population estimates of local governments in Montana.
1981	Designed and programmed a computer-based data system for outputting statistical profiles for all Montana counties. These profiles contain over 1,000 pieces of information for each county.
1980	Compiled, edited, and published a computer-based directory of Montana manufacturers and their products.
1980	Responsible for designing and managing a computer-based program for allocating coal tax funds to all Montana counties.
1979	Wrote and edited an annual report analyzing and describing the federal grant awards monitored by the Montana Department of Community Affairs.

1979 Developed a computer model for analyzing Montana's alternatives in the Federal Revenue Sharing Program. This included developing a model to simulate distribution of federal funds within Montana as well as outputting Montana's alternatives with respect to changing the basic revenue sharing formula.

SELECTED REPORTS AND PUBLICATIONS:

School Enrollment Projections for Lewis and Clark County and Helena School District No. 1, prepared for Helena School District No. 1, 1978.

Montana Population Projections, 1975-2000, prepared for Montana Department of Community Affairs, 1977.

Montana Population Estimates, 1950-1975, prepared for Montana Department of Community Affairs, 1975.

A Survey of Population Estimation Procedures in Use by Local Governments, prepared for Montana Department of Community Affairs, 1975.

Montana Directory of Manufacturers, prepared for Montana Department of Planning and Economic Development, 1974.

Revenue Sharing, Montana's Alternatives, prepared for Montana Department of Planning and Economic Development, 1974.

RESUME

LINDA D. TWIGGS

EDUCATION:

B.S. (Magna cum laude), Criminal Justice - Sociology
University of Nebraska - 1978
Omaha, Nebraska

PROFESSIONAL EXPERIENCE:

1982-Present — Economic Consultants Northwest
Helena, Montana

Responsibilities: Research associate responsible for survey questionnaire design, survey coordination, editing, report writing, project administration, data collection.

1981-82 — Western Analysis, Inc.
Helena, Montana

Responsibilities: Research Associate responsible for primary data collection, field supervision of survey research teams, and organization of social indicator data base.

1978-82 — Olson-Elliott & Associates
Helena, Montana

Responsibilities: Responsible for office management.

SELECTED PROJECTS:

1988 — State Bar of Montana (in progress): design of survey instrument to be administered to Montana attorneys. The information gathered will assist the State Bar in planning future legal education seminars.

1988-89 — Private client (in progress): preparation of socioeconomic section (social life, community services) of an environmental assessment for a proposed water development project on the Fort Apache Indian Reservation, Arizona.

1985-86	Montana Department of Health and Environmental Sciences (in progress): survey coordinator of continuation of Montana behavioral risk surveillance survey.
1985	Montana Department of State Lands: prepared the community services, social life, and housing sections for the Jefferson County Montana Tunnels Draft Environmental Impact Statement.
1985	Montana Department of State Lands: prepared the community services/housing sections for the Jardine Joint Venture Draft Environmental Impact Statement.
1984-85	Montana Office of Public Instruction: administration of professional development grants for vocational educators, counselors, and administrators.
1984	Montana Department of Natural Resources and Conservation: supervised a statewide telephone survey to gather information on Montanans' energy conservation activities and attitudes.
1984	Montana Department of Justice: conducted a statewide survey to determine the self-sufficiency of the DUI system.
1984	Montana Department of Natural Resources and Conservation: provided technical assistance in projecting residential wood fuel use within Montana.
1984	Montana Commissioner of Higher Education: designed and conducted a mail survey to evaluate the Montana Career Information System program, a statewide career and educational information network.
1984	Montana Department of Health and Environmental Sciences: assisted in the supervision of telephone interviews to characterize and measure the status of health and behavioral risk factors of adult Montanans.
1984	Systems Services Engineering: conducted a reconnaissance level survey to determine the market potential for dragline simulators in the mining industry.

1984	HKM Associates: conducted land use studies using aerial photography and field reconnaissance to determine the number and location of residences in the Gallatin River floodplain.
1984	Galusha Higgins & Galusha, CPAs: designed and directed a client opinion survey to determine clients' awareness of services offered by the accounting firm and whether these services needed improvement.
1983-84	Montana Office of Public Instruction: gathered pertinent information to be used in assessing secondary vocational education needs.
1984	Ken Wanner (private client): conducted a telephone survey to determine the feasibility of expanding a bowling facility in western Montana.
1983-84	Montana Office of Public Instruction: responsible for designing, directing, and evaluating a mail survey sent to Montana small businesses. This study was conducted to determine the feasibility of promoting economic development in Montana through use of personal computers in small businesses.
1983	ASARCO, Inc.: assisted in the administration of a telephone public image survey of the East Helena ASARCO plant.
1982-83	Montana Department of Natural Resources and Conservation: coordinated survey to aid the Energy Division in targeting its public information, education, and outreach activities for renewable energy and energy conservation.
1982	Montana Office of Public Instruction: responsible for managing survey and writing report on follow-up employment information for Montana vocational education students.
1982	Town Pump, Inc.: assisted in the supervision and data collection for a time and motion study.
1982	Montana Power Company: responsible for assisting in recreation survey and data collection for the Hauser Dam Expansion project.

1984

1984

1983-84

1984

1983-84

1983

1982-83

1982

1982

1982

1982	Assisted in data collection and writing of Environmental Impact Assessment on Colstrip Coal Mining/Generating Facility Complex.
1981	Montana Department of State Lands: responsible for assisting in the organization and compilation of social indicator/vital statistics data for Stillwater PGM Mining Project.
1981	Montana Power Company: conducted personal interviews and telephone survey to assist in corridor selection for the Central Montana High Voltage Transmission Line.
1981	Gathered social indicator/vital statistics data for Thompson Falls Hydroelectric project.
1981	Conducted social service interviews for baseline study on Homestake Mining/Jardine project.

JOE C. ELLIOTT, PH.D.
ECOLOGICAL CONSULTANT

EDUCATION:

University of Montana, 1969, Ph.D., Botany

Wisconsin State University-Eau Claire, 1965, B.S.,
Biology and Chemistry

EXPERIENCE:

1981-Present. Ecological Consultant
Helena, Montana

Conducted independent and multidisciplinary studies associated with the impacts of various types of development on vegetation and wildlife. Prepared management plans and technical papers on facets of natural resource management. Presented expert testimony on adequacy of environmental analyses.

1980-81. Montana Department of Natural Resources and Conservation, Energy Division
Helena, Montana

Coordinator of the Interagency Pipeline Task Force. Coordinated the activities of six state agencies involved with the siting and regulation of the proposed Northern Tier Pipeline and the Northern Border Pipeline.

1975-80. Olson-Elliott and Associates
Helena, Montana

Principal/Plant Ecologist. Responsibilities included management of range, botanical, and wildlife studies and participation as principal investigator on various projects.

1973-74. Ecological Consulting Service
Helena, Montana

Assistant Manager and Director of Technical Services. Directed and participated in research concerning the application of remote sensing for resource evaluation. Researched the effects of airborne sulfur compounds on coniferous trees near Missoula, Montana.

JOE C. ELLIOTT, Ph.D.
ECOLOGICAL CONSULTANT

EDUCATION:

University of Montana, 1965, Ph.D., Botany

Wisconsin State University-Eau Claire, 1960, B.S.,
Biology and Chemistry

EXPERIENCE:

1981-Present. Ecological Consultant
Helena, Montana

Conducted independent and multidisciplinary studies
associated with the impacts of various types of
development on vegetation and wildlife. Prepared
management plans and technical papers on facets of
natural resource management. Presented expert
testimony on adequacy of environmental analyses.

1980-81. Montana Department of Natural Resource and
Conservation, Energy Division
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Coordinator of the Interagency Pipeline Task Force.
Coordinated the activities of six state agencies
involved with the siting and regulation of the
proposed Northern Tier Pipeline and the Northern
Border Pipeline.

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Helena, Montana

Principal/Plant Ecologist. Responsibilities included
management of range, botanical, and wildlife studies
and participation as principal investigator on various
projects.

1973-74. Ecological Consulting Service
Helena, Montana

Assistant Manager and Director of Technical Services.
Directed and participated in research concerning the
application of remote sensing for resource evaluation.
Researched the effects of airborne sulfur compounds on
coniferous trees near Missoula, Montana.

1971-72. University of Nairobi
Kenya, Africa

Visiting Lecturer. Taught classes in crop physiology and ecology for the the Faculty of Agriculture and advised doctoral students researching photosynthetic efficiency of tropical plant species.

1970-71. University of Montana
Missoula, Montana

Laboratory Coordinator. Designed and conducted laboratory exercises for botany students. Advised teaching assistants on methods for teaching laboratory courses more effectively.

1969-70. Center for the Biology of Natural Systems
Washington University
St. Louis, Missouri

Washington University Post-Doctoral Associate. Participated as part of a multidisciplinary team in a study concerned with the biological cycling of nitrogen compounds from fertilizer in an agricultural region of Illinois. The environmental problems related to high nitrogen levels, such as eutrophication of surface water and methemoglobinemia in cattle and humans, were studied in depth.

1969. University of Montana
Missoula, Montana

Research Associate. Studied the influence of airborne fluorides on the flora and fauna in the vicinity of an aluminum reduction plant.

1968-69. University of Montana
Missoula, Montana

Teaching Assistant. Assisted in teaching courses in general biology to undergraduate students.

1967. University of Montana Biological Station
Missoula, Montana

Teaching Assistant. Assisted in a course on the taxonomy and ecology of bryophytes, lichens, and pteridophytes.

1966. University of Montana
Missoula, Montana

Research Assistant. Collected and identified grasses in southern and southwestern United States for use in agrostology classes.

PUBLICATIONS:

Elliott, J. and Richard T.T. Forman. 1965. Mosses from Eau Claire County, Wisconsin. The Bryologist. 68:471-73.

Elliott, Joe. 1969. Asymmetric Cell Division in the Protonema of Sphagnum palustre. XI International Botanical Congress (Abstract).

Elliott, Joe. 1970. Asymmetric Cell Divisions and Morphogenesis in the Protonema of Sphagnum palustre. Ph.D. Thesis, University of Montana. 81 pp.

Elliott, Joe. 1971. Histochemical Analyses of Differentiation in the Protonema of Sphagnum palustre. Amer. J. Bot. 58:5 (Abstract).

Elliott, Joe. 1975. Applications of Aerial Infrared Photography for Resource Evaluation and Management. Western Wildlands. Vol. 1, No. 4. (Publication of Montana Forest and Conservation Experiment Station, University of Montana)

Batson, F. and J. Elliott. 1975. Surface Resource Inventory of Eastern Montana Rangelands, Utilizing High Altitude Color Infrared Aerial Photography. In: Proceedings of Fort Union Coal Symposium, Montana Academy of Sciences. Vol. 5:651-62.

Elliott, J. and D. Culwell. 1977. The Northern Powder River River Basin Regional Environmental Impact Statement: A Joint State-Federal Planning Effort. Western Wildlands. Vol. 3, No. 4. (Publication of Montana Forest and Conservation Experiment Station, University of Montana)

Elliott, J. 1983. Vegetation Inventories in the Fort Union Region. In: Coal Development: Collected Papers. Bureau of Land Management, Denver, Colorado. pp. 1061-86.

Elliott, J. 1983. Natural Resource Applications of Remote Sensing. In: Coal Development: Collected Papers. Bureau of Land Management, Denver, Colorado. pp. 1375-94.

AWARDS:

N.S.F. undergraduate stipend for study at Wisconsin State University Field Station, summers of 1964 and 1965.

N.D.E.A. Fellowship for Graduate Study at University of Montana, September 1965 to June 1968.

Charles W. Waters Memorial Award for Outstanding Graduate Student in Botany, University of Montana, 1969.

PROFESSIONAL ORGANIZATIONS:

Rocky Mountain Association of Environmental Professionals.

National Association for the Advancement of Science.

PROJECTS AND CLIENTS

1984. Montana Department of Natural Resources and Conservation
Helena, Montana

Worked with technical staff of the Water Management Bureau to design and implement methods to identify, map, and quantify potentially irrigable lands in the Missouri River basin.

1984. Montana Department of Fish, Wildlife and Parks
Helena, Montana

Inventoried potentially irrigable land in the upper Clark Fork basin using economic (IRRSYS model) and soil criteria. Prepared environmental analysis of impacts of instream flow reservation on agriculture.

1984. Montana Department of State Lands
Helena, Montana

Prepared an impact analysis of vegetation of Western Energy Company's proposed Area D expansion (coal mine).

1984. Technical Resource Corporation
Helena, Montana

Conducted range and juniper ecology studies on the White Mountain Apache Reservation, Arizona.

1983. Morrison-Maierle, Inc.
Helena, Montana

Conducted field studies and prepared an Environmental Assessment for a proposed hydroelectric dam and irrigation project on the White Mountain Apache Reservation, Arizona.

1983. Montana Department of Fish, Wildlife and Parks
Helena, Montana

Designed a five-year study and initiated field work to monitor the impacts of the 500-kV Garrison-Spokane transmission line on elk use of summer/fall security habitat and on hunter opportunity.

1983. Lewis and Clark County Conservation District
Helena, Montana

Assisted Streamworks in the preparation of a comprehensive management plan to rehabilitate Prickly Pear Creek in Lewis and Clark County, Montana.

1983. Hydrometrics
Helena, Montana

Conducted land use and vegetation studies near Colstrip and Decker, Montana, to assist in Alluvial Valley Floor determinations.

1982. Montana Department of Fish, Wildlife and Parks
Helena, Montana

Conducted impact and siting studies for the Bonneville Power Administration's (BPA) proposed 500-kV Garrison-Spokane and 230-kV Flathead Valley tranmission lines. Determined whether BPA's Environmental Impact Statement (EIS) fulfilled the requirements of the Montana Major Facility Siting Act (MFSA).

1982. Montana Department of Fish, Wildlife and Parks
Helena, Montana

Reviewed the Western Area Power Administration's (WAPA) Draft EIS for the proposed 230-kV Fort Peck-Havre transmission line to determine whether it fulfilled the the requirements of MFSA.

1982. Montana Department of Fish, Wildlife and Parks
Helena, Montana

Prepared and presented expert testimony for the Federal Energy Regulatory Commission hearings concerning the impacts of the proposed Kootenai Falls hydroelectric project on vegetation.

1982. Historical Research Associates
Missoula, Montana

Prepared an impact assessment of the proposed Tongue River Railroad on the Fort Keough Agricultural Research Station, Miles City, Montana.

1982. Gough, Shanahan, Johnson and Waterman Law Firm
Helena, Montana

Prepared and presented expert testimony on the adequacy of an EIS prepared by the Montana Department of Highways for a highway expansion project near Helena, Montana.

1981. Bureau of Land Management
Denver, Colorado

Participated in BLM-sponsored workshops and authored technical papers concerning vegetation studies and and remote sensing in the Fort Union Coal Region.

1981. Bureau of Land Management
Denver, Colorado

Conducted studies on EMRIA sites in southeastern Montana and Utah on soils and vegetation.

1980. Montco
Billings, Montana

Conducted baseline studies on rangeland productivity and plant community structure in eastern Montana on the site of a proposed coal mine.

1980. Westech
Helena, Montana

Conducted baseline studies on vegetation production and species composition for a proposed coal mine and railroad corridor in southeastern Montana and Wyoming.

1979. Montana Department of Health and Environmental Sciences
Helena, Montana

Prepared technical papers on the effects of various air pollutants on vegetation. Information was used to revise air quality standards.

1979. Montana Department of Natural Resources and Conservation
Helena, Montana

Participated in a study to determine the impacts of the proposed Northern Tier Pipeline on wildlife, vegetation, soils, and aquatic resources for several corridors across Montana.

1979. Montana Department of State Lands
Helena, Montana

Studied the impacts of coal strip mining in eastern Montana on riparian vegetation and wildlife. This study was associated with mining unsuitability of an area near the Westmoreland Coal Mine.

1979. Montana Department of Natural Resources and Conservation
Helena, Montana

Studied the impacts of the proposed Kootenai Falls hydroelectric project on the riparian vegetation in northwestern Montana.

1979. Alaska Department of Fish and Game
Fairbanks, Alaska

Participated in a field study on the North Slope of the Brooks Range, Alaska, concerning predation of grizzly bear on caribou.

1978. Montco
Billings, Montana

Conducted baseline studies on rangeland productivity and plant community structure in eastern Montana on the site of a proposed coal mine.

1978. Bureau of Indian Affairs
Billings, Montana

Conducted a study on the baseline pathology of ponderosa pine on the Northern Cheyenne Indian Reservation in eastern Montana. This two-year air quality study was concerned with the relationship between elevated fluoride and sulfur levels in vegetation and insect pathology.

1978. U.S. Fish and Wildlife Service
Lewistown, Montana

Participated on a multidisciplinary team to study the range, soil, and vegetational resources on the C.M. Russell National Wildlife Refuge in central Montana. This study was primarily concerned with conflicts between wildlife and cattle use of the range.

1977. U.S. Forest Service
Libby, Montana

Participated in a study to determine habitat utilization by grizzly bear in the Scotchman Peaks Wilderness in northwestern Montana.

1977. Montana Governor's Office
Helena, Montana

Directed the Northern Powder River Basin Regional Environmental Impact Statement Team. This study addressed the regional impacts of coal development and was conducted by a joint state-federal team.

1977. Bureau of Land Management
Billings, Montana

Participated in a remote sensing study in North Dakota to delineate vegetation, wildlife habitat, geological features, erosion conditions, range conditions, and surface water hydrology.

1976. Bonneville Power Administration
Portland, Oregon

Evaluated the impact of transmission lines on vegetation and wildlife in a northwestern Montana and northern Idaho transmission line corridor study (Libby Integration Project).

1978. Montco
Billings, Montana

Conducted baseline studies on rangeland productivity and plant community structure in eastern Montana on the site of a proposed coal mine.

1978. Bureau of Indian Affairs
Billings, Montana

Conducted a study on the baseline pathology of ponderosa pine on the Northern Cheyenne Indian Reservation in eastern Montana. This two-year air quality study was concerned with the relationship between elevated fluoride and sulfur levels in vegetation and insect pathology.

1978. U.S. Fish and Wildlife Service
Lewistown, Montana

Participated on a multidisciplinary team to study the range, soil, and vegetational resources on the C.M. Russell National Wildlife Refuge in central Montana. This study was primarily concerned with conflicts between wildlife and cattle use of the range.

1977. U.S. Forest Service
Libby, Montana

Participated in a study to determine backlog utilization by grizzly bear in the Scotchman Peaks wilderness in northwestern Montana.

1977. Montana Governor's Office
Helena, Montana

Directed the Northern Powder River Basin Regional Environmental Impact Statement Team. This study addressed the regional impacts of coal development and was conducted by a joint state-federal team.

1977. Bureau of Land Management
Billings, Montana

Participated in a remote sensing study in North Dakota to delineate vegetation, wildlife habitat, geological features, grazing conditions, range conditions, and surface water hydrology.

1976. Bonneville Power Administration
Portland, Oregon

Evaluated the impact of transmission lines on vegetation and wildlife in a northwestern Montana and northern Idaho transmission line corridor study (Libby Integration Project).

1976. Bureau of Land Management
Billings, Montana

Participated in a study in central Montana to determine the feasibility of using remote sensing techniques to estimate rangeland productivity and carrying capacity.

1976. Area Wide Planning Organization
Broadus, Montana

Participated in a remote sensing study to evaluate point and non-point water pollution sources in eastern Montana.

1976. Hoerner-Waldorf Corporation
Missoula, Montana

Conducted a study to determine the impacts of airborne sulfur compounds on conifers in western Montana.

1976. Anaconda Company
Anaconda, Montana

Conducted a study to determine the impacts of airborne smelter emissions on plant communities and species diversity.

1975. U.S. Forest Service
Missoula, Montana

Participated in a study to determine the impacts of spruce budworm eradication program on pollinating insects and on seed production in plants dependent on insect pollination.

1975. Montana Department of Highways
Helena, Montana

Conducted a study to determine the impacts of interstate highway construction on agricultural and rangeland productivity.

1975. Montana Department of Natural Resources and Conservation
Helena, Montana

Conducted an impact study of the effects of the Clyde Park to Dillon transmission line construction on vegetation and wildlife.

1974. Bureau of Land Management
Billings, Montana

Participated in a remote sensing study to identify and map resource features of the Rosebud and Coalwood Planning Units in southeastern Montana.

1974. Montana Department of State Lands
Helena, Montana

Conducted a remote sensing study to detect saline seeps on the Highwood Bench using two scales of color infrared photography.

1973. Hoerner-Waldorf Corporation
Missoula, Montana

Conducted a study to determine the effects of airborne sulfur compounds on pathology of Douglas fir and ponderosa pine. This study dealt primarily with the correlation of meteorological data and sulfur content in conifer needles with the patterns of necrosis in the needle tissues.

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION
ENERGY DIVISION

TED SCHWINDEN, GOVERNOR

32 SOUTH EWING

STATE OF MONTANA

(406) 449-3780 ADMINISTRATOR & PLANNING AND ANALYSIS BUREAU
(406) 449-3940 CONSERVATION & RENEWABLE ENERGY BUREAU
(406) 449-4600 FACILITY SITING BUREAU

HELENA, MONTANA 59620

December 3, 1982

All Montanans are concerned about the rising costs of energy. Unfortunately, we have only a sketchy idea about how much the citizens of the state know or want to know about energy conservation and renewable energy programs.

You are one of a small number of people who are being asked their opinion on this matter. Your name was drawn in a random sample of the members of your profession. In order that the results will truly represent the thinking of the people of Montana, it is important that each questionnaire be completed and returned. The questionnaires will be analyzed at the Statistical Center at Montana State University.

You may be assured of complete confidentiality. Your name will never be placed on the questionnaire nor will the mailing list for this survey ever be released to anyone by us.

The results of this research will be used to improve our outreach and public information activities in the areas of energy conservation and renewable energy. You may receive a summary of the results by printing your name and address on the back of the return envelope. Please do not put this information on the questionnaire itself.

I would be most happy to answer any questions you might have. Please write or call (449-3940).

Thank you for your assistance.

Sincerely,

Tom Livers

Tom Livers
Project Director

Enclosure

"AN EQUAL OPPORTUNITY EMPLOYER"

MCIS POST-SURVEY QUESTIONNAIRE

INSTRUCTIONS:

You have just completed using the Montana Career Information System (MCIS) and we would like to ask you some questions on your opinion of the system. Please put an "X" in the box provided for each question and return the questionnaire to the site coordinator.

Q-1 How would you rate your overall satisfaction with MCIS in assisting you with a career or educational decision?

1) VERY SATISFIED ☐
2) SOMEWHAT SATISFIED ☐ (35)
3) NOT SATISFIED ☐

Q-2 Including today, how many times have you used MCIS?

1) TODAY IS THE FIRST TIME ☐
2) TWO TIMES ☐ (36)
3) THREE TIMES ☐
4) FOUR OR MORE TIMES ☐

Q-3 How would you rate the difficulty in using MCIS?

1) NOT DIFFICULT ☐
2) SOMEWHAT DIFFICULT ☐ (37)
3) VERY DIFFICULT ☐

Q-4 Did you think it took too long to get the information that you wanted?

1) YES ☐ (38)
2) NO ☐

Q-5 How long did you use the system today?

1) 15 MINUTES OR LESS ☐
2) ABOUT 30 MINUTES ☐
3) ABOUT 45 MINUTES ☐ (39)
4) ABOUT 1 HOUR ☐
5) MORE THAN 1 HOUR ☐

Q-6 If you had to pay to use MCIS, how much would you be willing to pay to use the system for 30 minutes?

1) LESS THAN $2.00 ☐
2) $2.01 TO $4.00 ☐
3) $4.01 TO $6.00 ☐ (40)
4) MORE THAN $6.00 ☐

Q-7 How helpful did you find the User's Handbook in using the system?

1) VERY HELPFUL ☐
2) SOMEWHAT HELPFUL ☐ (41)
3) NOT HELPFUL ☐

Q-8 How easy was QUEST to understand?

1) VERY EASY ☐
2) SOMEWHAT EASY ☐
3) NOT EASY ☐ (42)
4) DID NOT USE QUEST ☐

Q-9 How helpful was QUEST in assisting you with a career choice?

1) VERY HELPFUL ☐
2) SOMEWHAT HELPFUL ☐
3) NOT HELPFUL ☐ (43)
4) DID NOT USE QUEST ☐

Q-10 How understandable did you find the information that you received from MCIS?

1) VERY UNDERSTANDABLE ☐
2) SOMEWHAT UNDERSTANDABLE ☐ (44)
3) NOT UNDERSTANDABLE ☐

Q-11 How useful do you think it is to receive MCIS information to take with you for future reference?

1) VERY USEFUL ☐

2) SOMEWHAT USEFUL ☐ (45)

3) NOT USEFUL ☐

Q-12 How helpful was the Occupational Descriptions (DESC) section in informing you about occupations in which you were interested?

1) VERY HELPFUL ☐

2) SOMEWHAT HELPFUL ☐ (46)

3) NOT HELPFUL ☐

4) DID NOT USE DESC ☐

If NOT HELPFUL, what type of additional information do you think DESC should provide?

_____

_____

Q-13 How useful did you find the employment outlook information?

1) VERY USEFUL ☐

2) SOMEWHAT USEFUL ☐

3) NOT USEFUL ☐ (47)

4) DID NOT USE EMPLOYMENT OUTLOOK ☐

If NOT USEFUL, what type of additional information do you think this section should provide?

_____

_____

Q-14 How helpful was the Preparation (PREP) section in giving you a good idea of how to prepare for occupations in which you were interested?

1) VERY HELPFUL ☐

2) SOMEWHAT HELPFUL ☐ (48)

3) NOT HELPFUL ☐

4) DID NOT USE PREP ☐

If NOT HELPFUL, what type of additional information do you think PREP should provide?

_____

_____

Q-15 How helpful was the Program (PROG) section in providing you with the information that you needed to know about educational programs in which you were interested?

1) VERY HELPFUL ☐

2) SOMEWHAT HELPFUL ☐ (49)

3) NOT HELPFUL ☐

4) DID NOT USE PROG ☐

If NOT HELPFUL, what type of additional information do you think PROG should provide?

_____

_____

Q-16 How useful was the Financial Aid (FINAID) section in providing you with the information that you needed to know?

1) VERY USEFUL ☐

2) SOMEWHAT USEFUL ☐ (50)

3) NOT USEFUL ☐

4) DID NOT USE FINAID ☐

If NOT USEFUL, what type of additional information do you think FINAID should provide?

_____

_____

Q-17 How helpful was the information about colleges and schools in providing you with the necessary information about schools in which you were interested?

1) VERY HELPFUL ☐

2) SOMEWHAT HELPFUL ☐ (51)

3) NOT HELPFUL ☐

4) DID NOT REQUEST THIS INFORMATION ☐

If NOT HELPFUL, what type of additional information do you think would be helpful when requesting information on colleges and schools?

_____

_____

Q-18 How useful would it be to you if MCIS provided information on out-of-state colleges and schools?

1) VERY USEFUL ☐

2) SOMEWHAT USEFUL ☐ (52)

3) NOT USEFUL ☐

4) NOT INTERESTED IN THIS INFORMATION ☐

Q-19 What type of out-of-state school information do you think MCIS should provide? (Mark all that apply.)

1) ROCKY MOUNTAIN AND PACIFIC NORTHWEST COLLEGES AND UNIVERSITIES ☐ (53)

2) ROCKY MOUNTAIN AND PACIFIC NORTHWEST TRADE SCHOOLS ☐ (54)

3) ALL UNITED STATES COLLEGES AND UNIVERSITIES ☐ (55)

4) ALL UNITED STATES TRADE SCHOOLS ☐ (56)

5) NOT INTERESTED IN THIS INFORMATION ☐ (57)

Q-20 Which of the following statements describe what you learned by using MCIS today? (Mark all that apply.)

1) LEARNED WHAT DUTIES WOULD BE INVOLVED IN A SPECIFIC JOB ☐ (58)

2) FOUND OUT HOW TO PREPARE FOR A CERTAIN JOB ☐ (59)

3) DISCOVERED THE KIND OF JOBS FOR WHICH I AM QUALIFIED ☐ (60)

4) LEARNED ABOUT THE EMPLOYMENT OUTLOOK IN MONTANA ☐ (61)

5) FOUND OUT WHAT PROGRAMS ARE OFFERED AT SPECIFIC SCHOOLS ☐ (62)

6) LEARNED ABOUT FEES AND SERVICES AVAILABLE AT SPECIFIC SCHOOLS ☐ (63)

7) LEARNED ABOUT FINANCIAL AID ☐ (64)

8) NONE OF THE ABOVE ☐ (65)

9) OTHER: SPECIFY _____ (66)

_____

Q-21 Would you recommend MCIS as a source of information to someone you know?

1) YES ☐ (67)

2) NO ☐

Q-22 Please check up to three places where you think the most convenient places for MCIS to be located would be.

1) LOCAL JOB SERVICE ☐ (68)

2) LOCAL LIBRARY ☐ (69)

3) LOCAL COLLEGES OR VOCATIONAL/TECHNICAL SCHOOLS IF THEY ALLOW NON-STUDENTS TO USE IT ☐ (70)

4) SOCIAL SERVICE OFFICES ☐ (71)

5) UNION HALLS ☐ (72)

6) LOCAL HIGH SCHOOLS IF THEYALLOW NON-STUDENTSTO USE IT ☐ (73)

7) PRESENT LOCATION ☐ (74)

PLEASE SEE BACK PAGE FOR INSTRUCTIONS

Is there anything else you would like to tell us about the Montana Career Information System? If so, please use this space for that purpose.

Your contribution to this effort is greatly appreciated. We hope the results from this survey will help us to serve you better in the future.

Montana Learning Services
Montana Career Information System
Office of the Commissioner of Higher Education
33 So Last Chance Gulch Helena, Montana 59620 (406) 449-4772

February, 1984

Dear MCIS User:

The Montana Career Information System (MCIS) strives to provide individuals with comprehensive, up-to-date career and educational information. As part of our program, we wish to know how you feel about MCIS so we can change the system to better meet your needs.

To determine your views, we are asking you to complete two questionnaires today--one before you use MCIS and one after you use it. You are one of a small number of individuals who are being asked their opinion about MCIS. In order that the results will truly represent the thinking of people who use MCIS, it is important that you complete a questionnaire before and after you use the system.

If you participate in the survey, you are assured of complete confidentiality. Your name will not be placed on the questionnaires and the questionnaires will be sealed in an envelope directly after you complete them. No one will know how you answered the questions.

Thank you for participating in this survey effort. We hope that the results will help us serve you better in the future.

Sincerely,

M. Sumyyah Bilāl

M. Sumyyah Bilāl
Director
Montana Career Information System

MCIS PRE-SURVEY QUESTIONNAIRE

INSTRUCTIONS:
Before you use the Montana Career Information System (MCIS), we would like you to answer the following questions. Please put an "X" in the box provided for each question and return your questionnaire to the site coordinator.

Q-1 How would you rate your knowledge of the following educational or occupational information systems?

	Very Familiar (1)	Somewhat Familiar (2)	Not Familiar (3)	
1) GUIDANCE INFORMATION SYSTEM (GIS)	☐	☐	☐	(5)
2) MONTANA CAREER INFORMATION SYSTEM (MCIS)	☐	☐	☐	(6)
3) VOCATIONAL INFORMATION FOR EDUCATION AND WORK (VIEW)	☐	☐	☐	(7)
4) OTHER: SPECIFY _____	☐	☐	☐	(8)

Q-2 Which of the following information systems have you used?

1) GIS ☐ (9)

2) MCIS ☐ (10)

3) VIEW ☐ (11)

4) NONE OF THE ABOVE ☐ (12)

5) OTHER: SPECIFY _____ (13)

Q-3 How would you rate your overall satisfaction with these information systems?

	Very Satisfied (1)	Somewhat Satisfied (2)	Not Satisfied (3)	
1) GIS	☐	☐	☐	(14)
2) MCIS	☐	☐	☐	(15)
3) VIEW	☐	☐	☐	(16)
4) OTHER: SPECIFY _____	☐	☐	☐	(17)
5) HAVE NOT USED SYSTEMS	☐			(18)

Q-4 Which of the following statements describe why you are using MCIS today? (Mark all that apply.)

1) TO LEARN WHAT DUTIES ARE INVOLVED IN A SPECIFIC OCCUPATION ☐ (19)

2) TO FIND OUT HOW TO PREPARE FOR A SPECIFIC JOB ☐ (20)

3) TO FIND OUT THE KIND OF JOBS FOR WHICH I AM QUALIFIED ☐ (21)

4) TO EXAMINE THE MONTANA EMPLOYMENT OUTLOOK ☐ (22)

5) TO FIND OUT WHAT PROGRAMS ARE OFFERED AT SPECIFIC SCHOOLS ☐ (23)

6) TO LEARN ABOUT FEES AND SERVICES AVAILABLE AT SPECIFIC SCHOOLS ☐ (24)

7) TO FIND OUT WHAT FINANCIAL AID IS AVAILABLE ☐ (25)

8) A COUNSELOR OR TEACHER SUGGESTED I USE THE SYSTEM ☐ (26)

9) AVAILABILITY ☐ (27)

10) NONE OF THE ABOVE ☐ (28)

11) OTHER: SPECIFY _____ (29)

Q-5 If you had to pay to use MCIS, how much would you be willing to pay to use the system for 30 minutes?

1) LESS THAN $2.00 ☐
2) $2.01 TO $4.00 ☐
3) $4.01 TO $6.00 ☐ (30)
4) MORE THAN $6.00 ☐

Q-6 What is your approximate age?

1) 12 TO 16 ☐
2) 17 TO 20 ☐
3) 21 TO 25 ☐
4) 26 TO 35 ☐ (31)
5) 36 TO 45 ☐
6) 46 AND OVER ☐

Q-7 Which of the following categories best describes your current occupational status?

1) EMPLOYED ☐
2) UNEMPLOYED, BUT ACTIVELY SEEKING EMPLOYMENT ☐ (32)
3) UNEMPLOYED AND NOT SEEKING EMPLOYMENT ☐
4) HOMEMAKER ☐

Q-8 Which of the following categories best describes your current educational status?

1) CURRENTLY ATTENDING SCHOOL ☐
2) NOT CURRENTLY ATTENDING SCHOOL ☐ (33)

Q-9 How many years of schooling have you completed?

1) LESS THAN 8TH GRADE ☐

2) 8TH GRADE TO 12TH GRADE ☐

3) HIGH SCHOOL GRADUATE ☐

4) SOME COLLEGE OR TECHNICAL/ TRADE SCHOOLING ☐ (34)

5) COLLEGE OR TECHNICAL/ TRADE SCHOOL GRADUATE ☐

6) COLLEGE GRADUATE COURSES ☐

7) MASTERS OR PH. D DEGREE ☐

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE. PLEASE RETURN THE QUESTIONNAIRE TO THE SITE COORDINATOR AND ENJOY USING THE MCIS!!!!

DEPARTMENT OF COMMERCE

TED SCHWINDEN, GOVERNOR

STATE OF MONTANA

CAPITOL STATION
1424 9TH AVENUE

(406) 449-3494

HELENA, MONTANA 59620-0401

October 24, 1983

Dear Businessperson:

The Office of Public Instruction is conducting a survey to determine the utilization of computers by the business community in our State. The results of this survey will assist them in determining the feasibility of using computers to increase economic development for small businesses in Montana.

Please take a few minutes of your time to complete the attached questionnaire so that they will receive a representative response from the small businesses across our State.

Thank you for your cooperation.

Sincerely,

Gary Buchanan
DIRECTOR

PERSONAL COMPUTERS IN SMALL BUSINESSES SURVEY

INSTRUCTIONS: Please put an "X" in the appropriate box for each question.

Q-1 Does your business own or lease a computer for business operations?

1) OWN ☐ (1)
2) LEASE OR TIME SHARE ☐ (2)
3) DO NOT USE A COMPUTER ☐ (3)

IF YOU DO NOT USE A COMPUTER, PLEASE SKIP TO Q-7

Q-2 What type of computer (hardware) does your business use?

1) MINI COMPUTER (IBM 38, IBM 34, IBM 32, IBM DATA MASTER, WANG) ☐ (4)
2) PERSONAL COMPUTER (RADIO SHACK, IBM PC, APPLE, COMMODORE, OTHER) ☐ (5)

Q-3 What are the primary functions of this computer in your business operation?

1) ACCOUNTING/TAX RECORDS ☐ (6)
2) WORD PROCESSING ☐ (7)
3) INVENTORY ☐ (8)
4) PAYROLL ☐ (9)
5) OTHER ☐ (10)

Q-4 How would you rate your overall satisfaction with your computer?

1) VERY SATISFIED ☐ (11)
2) SOMEWHAT SATISFIED ☐ (12)
3) NOT SATISFIED ☐ (13)

Q-5 Are the computer programs (software) that you use purchased or customized to fit your specific needs?

1) PURCHASED ☐ (14)
2) CUSTOMIZED ☐ (15)

Q-6 How would you rate your overall satisfaction with your software programs?

1) VERY SATISFIED ☐ (16)
2) SOMEWHAT SATISFIED ☐ (17)
3) NOT SATISFIED ☐ (18)

PLEASE SKIP TO Q-10

Q-7 Have you considered using a computer in your business operation?

1) YES ☐ (19)
2) NO ☐ (20)

Q-8 Which of the following factors have kept you from using a computer in your business operation?

1) LACK OF TRAINING ☐ (21)
2) UNAVAILABILITY OF SOFTWARE WHICH HAS APPLICATION TO YOUR SPECIFIC NEEDS ☐ (22)
3) COST TOO HIGH ☐ (23)
4) UNCERTAINTY REGARDING USEFULNESS OF COMPUTER OR KIND TO BUY ☐ (24)
5) COMPUTERS HAVE NO APPLICATION IN MY BUSINESS OPERATION ☐ (25)

Q-9 To what extent do you think a computer could improve your business operation?

1) GREAT DEAL ☐ (26)
2) SOMEWHAT ☐ (27)
3) NOT AT ALL ☐ (28)

Q-10 Are you aware of any training programs that are offered in your area?

1) YES ☐ (29)

2) NO ☐ (30)

Q-11 Would you or an employee be willing to attend training programs if they were offered in your area?

1) YES ☐ (31)

2) NO ☐ (32)

IF NO, SKIP TO Q-14

Q-12 How far would you be willing to travel to receive instruction?

1) LESS THAN 10 MILES ☐ (33)

2) 11 TO 30 MILES ☐ (34)

3) MORE THAN 30 MILES ☐ (35)

Q-13 If the instruction required 9 hours of classroom training, would you prefer:

1) 1 NIGHT (3 HOURS) FOR 3 WEEKS ☐ (36)

2) 3 NIGHTS (3 HOURS EACH NIGHT) FOR 1 WEEK ☐ (37)

3) 1 ALL DAY (9 HOUR) SESSION ☐ (38)

Q-14 What type of business do you operate?

_____ (39)

PLEASE SEE INSTRUCTIONS ON BACK PAGE

Is there anything else you would like to tell us about computers in business operations? If so, please use this space for that purpose.

Your contribution to this effort is greatly appreciated. If you would like to see the summary of results, a copy will be on file at the Office of Public Instruction in Helena, Montana.

Montana·Savings
and·Loan·League

January 12, 1983

Dear Friend:

The Montana Department of Natural Resources and Conservation (DNRC) is conducting a survey to assist in targeting its information, education, and outreach activities for renewable energy and energy conservation. Montana Savings and Loans have been randomly selected to be part of this survey.

Please complete the attached questionnaire. Thank you for your cooperation with this worthwhile project.

Sincerely,

Robert W. Hoene
Secretary-Treasurer
Montana Savings and
Loan League

Post Office Box 503
Helena, Montana 59624
406/442-3961

ENERGY OUTREACH SURVEY
LENDERS

INSTRUCTIONS: Please put an "X" in the appropriate box for each question.

Q-1 What percentage of energy consumption on a new home do you think you would save as a result of taking the following measures?

	MORE THAN 25% 1	LESS THAN 25% 2	NONE 3	
1) SUPER INSULATION (R-60 + CEILING, R-40 WALLS)	☐	☐	☐	(1)
2) PASSIVE SOLAR HEATING	☐	☐	☐	(2)
3) ACTIVE SOLAR HEATING	☐	☐	☐	(3)

Q-2 Would you lend money on the following energy conservation measures?

	YES 1	NO 2	
1) SUPER INSULATION (R-60 + CEILING, R-40 WALLS)	☐	☐	(4)
2) PASSIVE SOLAR HEATING	☐	☐	(5)
3) ACTIVE SOLAR HEATING	☐	☐	(6)

Q-3 How would you rate your knowledge of the utility companies' loan programs for financing residential energy conservation and renewable energy installations?

1) VERY FAMILIAR ☐1

2) SOMEWHAT FAMILIAR ☐2 (7)

3) NOT FAMILIAR ☐3

Q-4 To what extent do you think the utility companies' loan programs have contributed to residential energy conservation and renewable energy usage?

1) GREAT DEAL ☐1

2) SOMEWHAT ☐2 (8)

3) NOT AT ALL ☐3

Q-5 How would you rate your knowledge of the following state and federal residential tax programs to conserve energy?

	VERY FAMILIAR 1	SOMEWHAT FAMILIAR 2	NOT FAMILIAR 3	
1) FEDERAL ENERGY TAX CREDITS (TO HOMEOWNERS)	☐	☐	☐	(9)
2) FEDERAL ENERGY TAX CREDITS (TO FINANCIAL INSTITUTIONS)	☐	☐	☐	(10)
3) STATE ENERGY TAX CREDITS	☐	☐	☐	(11)
4) STATE PROPERTY TAX EXEMPTIONS	☐	☐	☐	(12)

Q-6 To what extent do you think the following state and federal tax programs have contributed to energy conservation and renewable energy?

	GREAT DEAL 1	SOMEWHAT 2	NOT AT ALL 3	
1) FEDERAL ENERGY TAX CREDITS (TO HOMEOWNERS)	☐	☐	☐	(13)
2) FEDERAL ENERGY TAX CREDITS (TO FINANCIAL INSTITUTIONS)	☐	☐	☐	(14)
3) STATE ENERGY TAX CREDITS	☐	☐	☐	(15)
4) STATE PROPERTY TAX EXEMPTIONS	☐	☐	☐	(16)

Q-7 The State of Montana is considering the use of a home energy rating system similar to the EPA car mileage system. Would you support the adoption of such a rating system for new and existing homes?

1) YES ☐1

(17)

2) NO ☐2

Q-8 Have you found information on energy conservation or renewable energy from any of the following sources?

		YES 1	NO 2	
1)	PROFESSIONAL ASSOCIATIONS/ PUBLICATIONS	☐	☐	(18)
2)	TV	☐	☐	(19)
3)	RADIO	☐	☐	(20)
4)	NEWSPAPERS	☐	☐	(21)
5)	MAGAZINES	☐	☐	(22)
6)	ENERGY WORKSHOPS	☐	☐	(23)

Q-9 Which of the following sources do you think could best be used to deliver information on energy conservation and renewable energy?

		VERY HELPFUL 1	SOMEWHAT HELPFUL 2	NOT HELPFUL 3	
1)	PROFESSIONAL ASSOCIATIONS/ PUBLICATIONS	☐	☐	☐	(24)
2)	TV	☐	☐	☐	(25)
3)	RADIO	☐	☐	☐	(26)
4)	NEWSPAPERS	☐	☐	☐	(27)
5)	MAGAZINES	☐	☐	☐	(28)
6)	ENERGY WORKSHOPS	☐	☐	☐	(29)

Q-10 How many workshops or professional meetings dealing with energy conservation or renewable energy have you attended in the past year?

1)	MORE THAN ONE	☐1	
2)	ONE	☐2	(30)
3)	NONE	☐3	

Q-11 Would you be willing to attend workshops related to your profession on energy conservation or renewable energy if they were available in your area?

1) YES ☐1

2) NO ☐2 (31)

Q-12 Who do you feel should pay for these workshops?

1) STATE GOVERNMENT ☐1

2) FEDERAL GOVERNMENT ☐2

3) UTILITY COMPANIES ☐3 (32)

4) PARTICIPANTS ☐4

Q-13 How many employees does your firm employ?

1) LESS THAN 5 ☐1

2) 6 TO 9 ☐2 (33)

3) 10 AND MORE ☐3

Q-14 Which best describes your current position in your firm?

1) PARTNER ☐1

2) OWNER ☐2 (34)

3) EMPLOYEE ☐3

PLEASE SEE INSTRUCTIONS ON BACK PAGE

Is there anything else you would like to tell us that would assist us in delivering energy conservation and renewable energy information? If so, please use this space for that purpose.

Your contribution to this effort is greatly appreciated. If you would like a summary of results, please print your name and address on the back of the return envelope (NOT on this questionnaire), and we will mail you a copy.

STATE OF MONTANA
DEPARTMENT OF AGRICULTURE
AGRICULTURE/LIVESTOCK BLDG.
CAPITOL STATION
HELENA, MONTANA 59620

TELEPHONE:
AREA CODE 406
449-3144

TED SCHWINDEN
GOVERNOR

W. GORDON McOMBER
DIRECTOR

November 17, 1982

Dear Farmers and Ranchers:

The Montana Department of Natural Resources and Conservation (DNRC) is conducting a survey to assist in targeting its information, education, and outreach activities for renewable energy conservation. Your business has been randomly selected to be a part of this survey.

I encourage you to take a few minutes to complete the attached questionnaire since, in the end, we stand to be the beneficiary of the improved delivery of government services.

Please accept my personal appreciation for your cooperation with this worthwhile project.

Sincerely,

W. Gordon McOmber
Director

An Affirmative Action/Equal Employment Opportunity Employer

INSTRUCTIONS: Please put an "X" in the appropriate box for each question.

Q-1 How would you rate your knowledge of the following energy technologies?

	VERY FAMILIAR	SOMEWHAT FAMILIAR	NOT FAMILIAR	
	1	2	3	
A. ELECTRICITY				
1) WIND GENERATION	☐	☐	☐	(1)
2) SMALL SCALE HYDROPOWER	☐	☐	☐	(2)
B. LIQUID/GASEOUS FUELS				
1) ETHANOL FROM GRAIN	☐	☐	☐	(3)
2) CROP RESIDUE	☐	☐	☐	(4)
3) HIGH PROTEIN BY-PRODUCTS FROM ETHANOL	☐	☐	☐	(5)
4) METHANE FROM MANURE	☐	☐	☐	(6)

Q-2 Which of the following alternative energy production technologies have you used or do you plan to use?

	USED/ NOW USING	PLAN TO USE	DO NOT PLAN TO USE	
	1	2	3	
A. ELECTRICITY				
1) WIND GENERATION	☐	☐	☐	(7)
2) SMALL SCALE HYDROPOWER	☐	☐	☐	(8)
B. LIQUID/GASEOUS FUELS				
1) ETHANOL FROM GRAIN OR CROP RESIDUE	☐	☐	☐	(9)
2) HIGH PROTEIN BY-PRODUCTS FROM ETHANOL	☐	☐	☐	(10)
3) METHANE FROM MANURE	☐	☐	☐	(11)

Q-3 Are you aware that any electricity produced on your farm or ranch may be sold to your local utility or cooperative?

1) YES ☐ (12)

2) NO ☐

Q-4 How do you rate your knowledge of the following conservation or renewable energy technologies?

	VERY FAMILIAR	SOMEWHAT FAMILIAR	NOT FAMILIAR	
	1	2	3	
1) WIND POWERED MECHANICAL STOCK WATER PUMPS	☐	☐	☐	(13)
2) EFFICIENT FARM EQUIPMENT SIZING	☐	☐	☐	(14)
3) ENERGY EFFICIENT IRRIGATION SYSTEMS (i.e., pump sizing, timed use, maintenance)	☐	☐	☐	(15)

Q-5 Which of the following conservation or renewable energy technologies have you used or do you plan to use?

	USED/ NOW USING	PLAN TO USE	DO NOT PLAN TO USE	
	1	2	3	
1) WIND POWERED MECHANICAL STOCKWATER PUMPS	☐	☐	☐	(16)
2) EFFICIENT FARM EQUIPMENT SIZING	☐	☐	☐	(17)
3) ENERGY EFFICIENT IRRIGATION SYSTEMS (i.e., pump sizing, timed use, maintenance)	☐	☐	☐	(18)

Q-6 How would you rate the following conservation or renewable energy technologies to reduce rising gasoline, diesel, natural gas, or electrical costs?

	COST EFFECTIVE 1	NOT COST EFFECTIVE 2	
1) WIND POWERED MECHANICAL STOCKWATER PUMPS	☐	☐	(19)
2) EFFICIENT FARM MACHINE SIZING	☐	☐	(20)
3) ENERGY EFFICIENT IRRIGATION SYSTEMS (i.e., pump sizing, timed use, maintenance)	☐	☐	(21)
4) SMALL SCALE HYDROPOWER	☐	☐	(22)
5) WIND GENERATED ELECTRICITY	☐	☐	(23)
6) METHANE FROM MANURE	☐	☐	(24)

Q-7 Have you found information on conservation or renewable energy from any of the following sources?

	YES 1	NO 2	
1) MONTANA RURAL ELECTRIC NEWS	☐	☐	(25)
2) MONTANA GRASSROOTS	☐	☐	(26)
3) MONTANA FARMER-STOCKMAN	☐	☐	(27)
4) MONTANA/WYOMING AGRI- NEWS	☐	☐	(28)
5) MONTANA WHEAT SCOOP	☐	☐	(29)
6) DAILY NEWSPAPERS	☐	☐	(30)
7) WEEKLY NEWSPAPERS	☐	☐	(31)
8) RADIO	☐	☐	(32)
9) TV	☐	☐	(33)
10) ASSOCIATION NEWSLETTERS	☐	☐	(34)
11) ASSOCIATION MEETINGS	☐	☐	(35)

Q-8 Which of the following sources do you think could best be used by the Montana Department of Natural Resources to deliver information on conservation or renewable energy?

	VERY HELPFUL 1	SOMEWHAT HELPFUL 2	NOT HELPFUL 3	
1) MONTANA RURAL ELECTRIC NEWS	☐	☐	☐	(36)
2) MONTANA GRASSROOTS	☐	☐	☐	(37)
3) MONTANA FARMER-STOCKMAN	☐	☐	☐	(38)
4) MONTANA/WYOMING AGRI-NEWS	☐	☐	☐	(39)
5) MONTANA WHEAT SCOOP	☐	☐	☐	(40)
6) DAILY NEWSPAPERS	☐	☐	☐	(41)
7) WEEKLY NEWSPAPERS	☐	☐	☐	(42)
8) RADIO	☐	☐	☐	(43)
9) TV	☐	☐	☐	(44)
10) ASSOCIATION NEWSLETTERS	☐	☐	☐	(45)
11) ASSOCIATION MEETINGS	☐	☐	☐	(46)

Q-9 How many acres are in the farm or ranch you operate (include land rented FROM others, exclude land rented TO others)?

1) LESS THAN 1,000 ACRES ☐ (47)
2) 1,000 TO 2,500 ACRES ☐
3) MORE THAN 2,500 ACRES ☐

Q-10 How many of these acres are in cropland (exclude pasture)?

1) LESS THAN 500 ACRES ☐ (48)
2) 500 to 1,250 ACRES ☐
3) MORE THAN 1,250 ACRES ☐

Please see instructions on back page.

Is there anything else you would like to tell us that would assist us in delivering energy conservation and renewable energy information? If so, please use this space for that purpose.

Your contribution to this effort is greatly appreciated. If you would like a summary of results, please print your name and address on the back of the return envelope (NOT on this questionnaire), and we will mail you a copy.

OFFICE OF PUBLIC INSTRUCTION

STATE CAPITOL
HELENA, MONTANA 59620
(406) 449-3095

Ed Argenbright
Superintendent

October 24, 1983

Dear Businessperson:

Personal computer use by many segments of our society has expanded due to increased availability, improved technology, and reasonable costs of computers. There are, however, still some businesses who do not rely on computers because of lack of information, training, or availability of applicable software.

You are one of a select number of people who are being asked their opinion on this matter. Your name was drawn in a random sample of the members of your profession. In order that the results will truly represent the thinking of the people of Montana, it is important that each questionnaire be completed and returned. The questionnaire will be analyzed at the Statistical Center at Montana State University.

The results of this survey will be used to determine the feasibility of expanding economic growth in small businesses by increasing the use of personal computers. A copy of the research findings will be on file at the Office of Public Instruction.

You may be assured of complete confidentiality. Your name will never be placed on the questionnaire nor will the mailing list for this survey ever be released to anyone by us.

I would be most happy to answer any questions you may have regarding this survey. Please call 449-2410. Thank you for your assistance.

Sincerely,

Gene R. Christiaansen
Project Director

Enclosure

32K-90W
9X12

APPENDIX C

SAMPLE DATA OUTPUT

APPENDIX C
SAMPLE DATA OUTPUT

Question 1, Variable 1:

Q-1 Would you say that you are:
1) very familiar
2) somewhat familiar
3) not familiar

with the East Helena ASARCO plant?

Question 17, Variable 26:

Q-17 I am going to read five general occupational classifications. Which one best fits your situation? Are you: [Check only one.]

1) Business employee _____
2) Government employee _____
3) Manager or owner of business _____
4) Employed in the home _____
5) Not presently employed _____

---------- FREQUENCY DISTRIBUTIONS ----------
HEADER DATA FOR: ARSARCO,2 LABEL:
NUMBER OF CASES: 412 NUMBER OF VARIABLES: 29 SIZE: 376 BLOCKS

VARIABLE: 1. PLANT

=====CLASS LIMITS====			FREQUENCY	PERCENT	....CUMULATIVE... FREQUENCY	PERCENT
.00 <	1.00		0	.00	0	.00
1.00 <	2.00		85	20.63	85	20.63
2.00 <	3.00		200	48.54	285	69.17
3.00 <	4.00		127	30.83	412	100.00
		TOTAL	412	100.00		

=====CLASS LIMITS====		FREQUENCY .....
.00 <	1.00	0 ¦
1.00 <	2.00	85 ¦==========
2.00 <	3.00	200 ¦==========
3.00 <	4.00	127 ¦==========

This table indicates that 20.6 percent (85 respondents) of the 412 people interviewed said they were very familiar with the ASARCO plant, whereas 48.5 percent (200 respondents) were somewhat familiar, and 30.8 percent (127 respondents) were not familiar with the plant.

This table indicates that 20.0 percent (25 respondents)
of the 412 people interviewed said they were very familiar with
the ASARCO plant; whereas 62.5 percent (200 respondents) were
somewhat familiar, and 30.8 percent (127 respondents) were not
familiar with the plant.

---------- FREQUENCY DISTRIBUTIONS ----------
HEADER DATA FOR: ARSARCO.2 LABEL:
NUMBER OF CASES: 412 NUMBER OF VARIABLES: 29 SIZE: 376 BLOCKS

VARIABLE: 26. OCCUP

=====CLASS LIMITS====		FREQUENCY	PERCENT	....CUMULATIVE... FREQUENCY	PERCENT
.00 <	1.00	0	.00	0	.00
1.00 <	2.00	123	29.85	123	29.85
2.00 <	3.00	91	22.09	214	51.94
3.00 <	4.00	83	20.15	297	72.09
4.00 <	5.00	38	9.22	335	81.31
5.00 <	6.00	77	18.69	412	100.00
	TOTAL	412	100.00		

=====CLASS LIMITS====		FREQUENCY	.....
.00 <	1.00	0	¦
1.00 <	2.00	123	¦==========
2.00 <	3.00	91	¦========
3.00 <	4.00	83	¦=======
4.00 <	5.00	38	¦===
5.00 <	6.00	77	¦=======

This table indicates that:

1) 29.9 percent (123 respondents) were business employees,

2) 22.1 percent (91 respondents) were government employees,

3) 20.2 percent (83 respondents) were managers or owners of a business,

4) 18.7 percent (77 respondents) were not presently employed, and

5) 9.2 percent (38 respondents) were employed in the home.

---------- CROSSTAB / CHI-SQUARE TESTS ----------
HEADER DATA FOR: ARSARCO,2 LABEL:
NUMBER OF CASES: 412 NUMBER OF VARIABLES: 29 SIZE: 376 BLOCKS

ROW VARIABLE= OCCUP (Q-17) COL. VARIABLE= PLANT (Q-1)

OBSERVED FREQUENCIES

	1	2	3	TOTAL
1	25	67	31	123
2	17	48	26	91
3	18	40	25	83
4	9	13	16	38
5	16	32	29	77
TOTAL	85	200	127	412

CHI-SQUARE = 8.157 D.F.= 8

---------- CROSSTAB / CHI-SQUARE TESTS ----------
HEADER DATA FOR: ARSARCO,2 LABEL:
NUMBER OF CASES: 412 NUMBER OF VARIABLES: 29 SIZE: 376 BLOCKS

ROW VARIABLE= OCCUP COL. VARIABLE= PLANT

OBSERVED PERCENTAGES

	1	2	3	TOTAL
1	6.07	16.26	7.52	29.85
2	4.13	11.65	6.31	22.09
3	4.37	9.71	6.07	20.15
4	2.18	3.16	3.88	9.22
5	3.88	7.77	7.04	18.69
TOTAL	20.63	48.54	30.83	100.00

CHI-SQUARE = 8.157 D.F.= 8

By cross-tabulating Q-1 with Q-17, the following results, for example, were obtained.

> of the 412 respondents that were very familiar with the ASARCO plant, 6.1 percent (25 respondents) were business employees; 4.1 percent (17 respondents) were government employees; 4.4 percent (18 respondents) were managers or owners of a business; 2.2 percent (9 respondents) were employed in the home; and 3.9 percent (16 respondents) were not presently employed.

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